



LEOPARD IMAGING INC

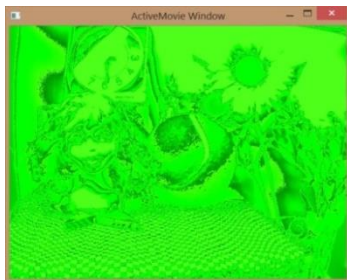
Rev. 1.0

LI-USB30-OV7251

Data Sheet

Key Features

- USB 3.0 Super Speed support
- 10-bit RAW data output without compression
- UVC compliance
- Monochrome sensor
- Global shutter
- Resolution: 640x480
- Frame rate: 100 fps
- Support register access function
- Support software and hardware trigger mode
- Provide customization services
- USB +5VDC powered device
- Compact Size: 26mmx26mm
- 2 Boards are stacked
- Part#: **LI-USB30-OV7251**
- Support multiple module options
- Default OV7251 module Part#: **LI-OV7251M-FF-80**



RAW data streaming



Camera Tool view mode



Lens Specification

- Focusing Range: 60cm to Infinity
- Focal length: 1.3 mm
- F/#: 2.8
- FOV (H): 80°
- TV Distortion < -25%

Applications

- Machine Vision
- Scientific Camera

SDK Supported

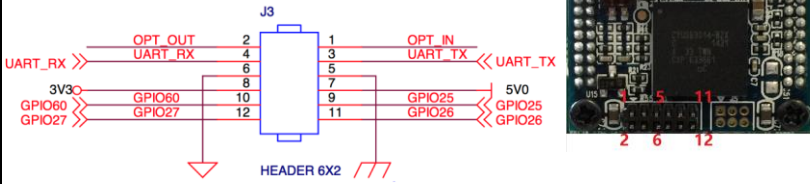
- Camera Tool Source Code in C#
- Capture & Display
- RAW to Grayscale Conversion
- Save file as BMP & RAW format
- Access registers



Leopard Imaging Inc.

1130 Cadillac Ct., Milpitas, CA 95035, USA
Phone: +1-408-263-0988
Fax: +1-408-217-1960
Email: sales@leopardimaging.com
Website: www.leopardimaging.com

Specification

| | |
|--|--|
| General Behavior | |
| Video Resolution @ Frame rate | 640 x 480 @ 100 fps |
| Sensitivity | 10,800mV/($\mu\text{W}\cdot\text{cm}^{-2}\cdot\text{sec}$)@850nm |
| Dynamic range | 10 bit |
| Interface (Optical) | |
| IR cut filter (on lens) | No |
| Sensor specification | OmniVision CMOS VGA image sensor OV7251 |
| Shutter | Global shutter |
| Format | 1/7.5" |
| Resolution | H:640, V:480 |
| Pixel size | H: 3 μm , V: 3 μm |
| Interface (Electrical) | |
| Interface | USB 3.0 |
| Supply voltage | USB 3.0 +5 VDC power source |
| Current consumption | Approx. 170 mA at 5 VDC |
| Software trigger | Support |
| Hardware trigger | Support Connect external trigger device to pin1 (OPT_IN) and pin5 (GND) of J3 |
|  <p>The diagram shows a 6x2 pin header (J3) with the following connections:</p> <ul style="list-style-type: none"> Pin 1: OPT_IN (connected to UART_TX) Pin 2: OPT_OUT Pin 3: UART_RX Pin 4: UART_TX Pin 5: GND Pin 6: GND Pin 7: GND Pin 8: GND Pin 9: GPIO25 (connected to 5V0) Pin 10: GPIO60 Pin 11: GPIO26 Pin 12: GPIO27 <p>The photograph shows the physical device with the J3 header highlighted in red, with pins 1, 5, 11, and 12 labeled.</p> | |
| Interface (Mechanical) | |
| Dimensions | L: 26 mm, W: 26 mm, H: 20 mm |
| Mass | 10 g |
| Adjustment (Manual) | |
| Shutter | Support |
| Gain | Support |
| Adjustment (Auto) | |
| Shutter | TBD |
| Gain | TBD |
| Environmental | |
| Max. temperature (operation) | 0 °C ~ 50 °C (32 °F~ 122 °F) |
| Max. temperature (storage) | -20 °C ~ 80 °C (-4 °F~176 °F) |
| Max. humidity (operation) | 20 % ~ 80 %, relative, non-condensing |
| Max. humidity (storage) | 20 % ~ 80 %, relative, non-condensing |

